



**UNITED STATES DEPARTMENT OF COMMERCE**  
**Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
087954,821	10/21/97	HORNG	EM73239

BACON AND THOMAS  
625 SLATERS LANE  
4TH FLOOR  
ALEXANDRIA VA 22314

QM51/0201

EXAMINER
MOSES, D

ART UNIT	PAPER NUMBER
3746	2

DATE MAILED: 02/01/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.  
**08/954,821**

Applicant(s)  
**Ching-Shen Horng**

Examiner  
**Daniel Moses**

Group Art Unit  
**3746**



☒ Responsive to communication(s) filed on Oct 21, 1997

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-4 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-4 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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## DETAILED ACTION

### *Drawings*

1. The drawings as submitted with the application are acceptable as formal drawings. No corrections are necessary. A copy of form PTO 948 is attached for reference.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Horng (5,093,599). Horng teaches a coil seat (2) including an axle tube (51), an upper polar plate assembly (3), a lower polar plate assembly (4), a winding (21) mounted between the upper polar plate and the lower polar plate, the lower polar plate including an edge (see Figure 1), a circuit board (6) mounted to the axle tube, including a sensor element (61) adapted to activate a rotor, the sensor element being located on a vertical line extending from the end edge of the lower polar plate assembly along a direction parallel to longitudinal axis of the axis tube (see Figures 1, 4, and 7; also note that in this case the examiner is considering the integrated circuit (61) to act as the

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sensing element, since it is well known in the art that such integrated circuits commonly use a device which operates on the Hall effect principle - note that the reference by Baines (5,097,170) teaches a Hall integrated circuit (16), so the examiner has applied this teaching to the integrate circuit of Horng as discussed). Horng also teaches a notch (27) defined in the circuit board for receiving the sensor element.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horng (5,093,599) in view of Murata (5,010,263). Horng teaches a coil seat (2) including an axle tube (51), an upper polar plate assembly (3), a lower polar plate assembly (4), a winding (21) mounted between the upper polar plate and the lower polar plate, the lower polar plate including an end edge (see Figure 1), a circuit board (6) mounted to the axle tube, including a sensor element (61) adapted to activate a rotor, the sensor element being located on a vertical line extending from the end edge of the lower polar plate assembly along a direction parallel to longitudinal axis of the axis tube (see Figures 1, 4, and 7; also note that in this case the examiner is considering the

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integrated circuit (61) to act as the sensing element, since it is well known in the art that such integrated circuits commonly use a device which operates on the Hall effect principle - note that the reference by Baines (5,097,170) teaches a Hall integrated circuit (16), so the examiner has applied this teaching to the integrate circuit of Horng as discussed). Horng also teaches a notch (27) defined in the circuit board for receiving the sensor element.

Horng does not teach a coil seat having a first mark formed thereon, the sensor element having a second mark formed thereon to align with the first mark, and where the circuit board has a third mark to be aligned with the first mark and the second mark to assure that the sensor element is located on a vertical line.

Murata teaches a Hall effect type sensing device with a frame body with a holding part (considered a mark) 104 to locate and hold the sensor during assembly in a predetermined position.

Therefore, it would have been obvious to one having ordinary skill in the art to use the mark(s) and holding device of Murata with the motor of Horng to advantageously provide for ease of assembly without the use of jigs (thereby lowering production costs) and for also improving the positioning accuracy which produces a sensing device having a high degree of precision, thus increasing reliability.

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*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel E. Moses whose telephone number is (703) 305-0050. The examiner can normally be reached on Monday through Thursday from 7:00 a.m. to 5:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy S. Thorpe, can be reached on (703) 308-0102. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3588.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0863.

*DEM*

DEM

January 12, 1999

*Charles G. Freay*  
CHARLES G. FREAY  
PRIMARY EXAMINER